PHACT NT

Sphairon Management Software for Network Terminators

Network Management PC Software

Operating Instructions Manual

Version 2.00

sphairon

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1 PHACT NT Overview

The PHACT NT software has been developed for the "Managed ISDN NT Network".

By means of a graphical user interface, PHACT NT offers the following main features:

- Local and remote configuration
- Central fault management
- Configuration of subnetworks
- Loading of configuration data
- Software download
- Batch programs

With the aid of these functions, the network can be quickly configured as well as easily analysed and tested. Swift and effective access to individual areas of the network saves time and effort in commissioning and maintenance.

The following products are supported:

- NT1+
- NT1+ *split*
- NT1+ *web*

PHACT NT can be connected to the NT’s via the ISDN.

Each PHACT NT workstation requires a fully CAPI 2.0 compliant ISDN interface card or a TA (like TA mini+) to be connected to the ISDN network.

You can find the latest information in the internet at "www.sphairon.com".

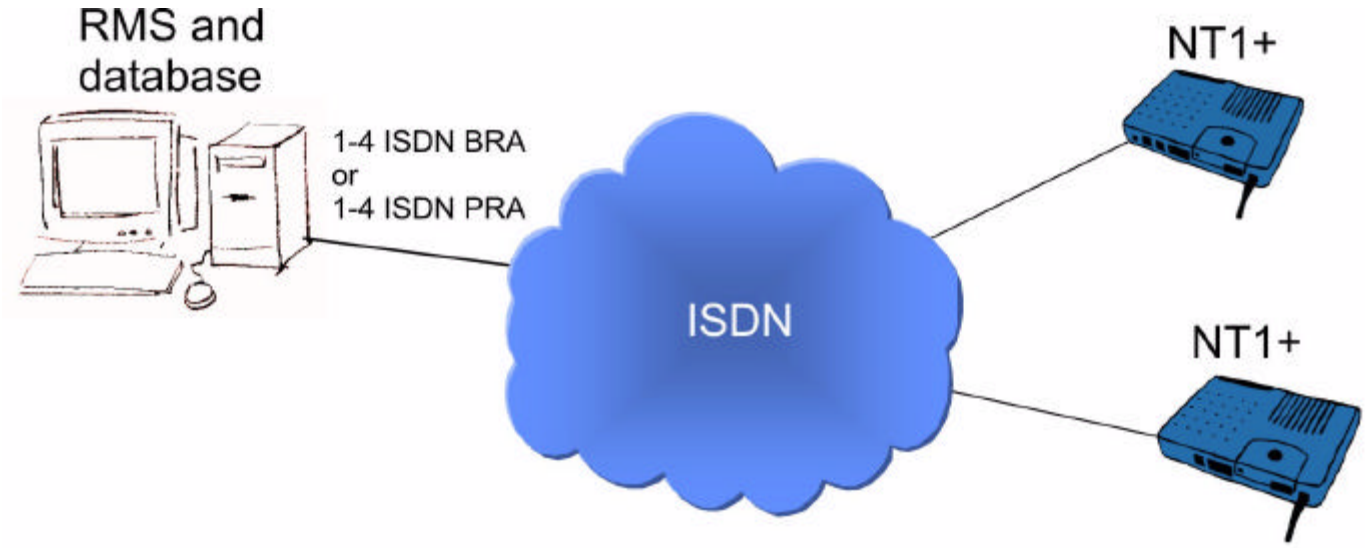


Figure 1: PHACT NT connection to the ISDN network.

1.1 ISO Management Functional Areas

1.1.1 Configuration Management

The configuration management facilitates the configuration of virtual customer networks, the grouping of particular application areas as well as the geographical assignment of NT’s to so-called subnetworks (domains). The NT’s are managed in corresponding tables."Import/Export" and "Search" functions allow for very easy management of these tables. The key data which is displayed and stored in the database are the configurable name, the ISDN address, the NT password and a freely usable information field. Graphical and text-based display and modification functions are implemented for adminstration, control, identification and supervision.

PHACT NT is able to load the configuration data of the network elements (NT’s), facility being provided to apply these functions to a group of network elements and to automate them.

1.1.2 Fault Management

The fault management supports the operator in detecting and localising faults occurring.

The status of the NT’s can be polled by PHACT NT. This is done whenever a connection to a network element is set up, or by polling a list of network elements and/or various subnetworks (polling method). Such polling can be started either immediately or at a certain time and is repeatable in cycles. The status of each network element is entered into the list and displayed on the screen. Any faults detected are registered in the alarm application.

1.1.3 Performance Management

The performance management provides the operator with an overview of all performance measurement points. The availability of performance measurement points depends on the type of NT1+.

1.1.4 Security Management

The "Security Management" functions protect access to PHACT NT and partially multi-level access to the various network elements by passwords. These passwords can be readily changed by the user.

2 PHACT NT Installation

2.1 PHACT NT Multi-User Installation

PHACT NT allows several PHACT NT installations to use a common database for the domain information. When installing PHACT NT, the user can specify a common network drive for saving the domains. During later operation, each user can then use and edit these common domains.

Note:	Execute a PHACT NT installation from multible PCs is not possible. Each PHACT NT user needs an installation and an own licence.

2.2 Preparation

2.2.1 PC configuration for one single user installation

Type	≥ Pentium II
Clock frequency	≥ 266 MHz
Main memory	≥ 64 MByte recommended
Hard disk	≥ 30 MByte free storage space
Operating system	Windows 95, Windows 98, Windows NT, Windows Me, Windows 2000, Windows XP
Drive	CD-ROM
Interfaces	1 parallel, 1 serial or one free slot for an ISDN card

2.2.2 PC configuration for multi user installation max. 50.000 NE

Type	≥ Pentium III
Clock frequency	≥ 500 MHz
Main memory	≥ 128 MByte recommended
Hard disk	≥ 100 MByte free storage space
Operating system	Windows NT, Windows 2000, Windows XP
Drive	CD-ROM
Interfaces	1 parallel, 1 serial or free slots for ISDN cards, LAN 100BaseT

2.2.3 PC configuration for a database server >50.000 NE

Type	≥ Pentium III
Clock frequency	≥ 1000 MHz
Main memory	≥ 512 MByte recommended
Hard disk	RAID 1+1 or RAID 5 system
Operating system	Windows NT, Windows 2000, Windows XP
Drive	CD-ROM
Backup	Backup system, USV
Interfaces	LAN 100BaseT

2.3 Installation of the ISDN access

Before installing the PHACT NT software must the ISDN connection being installed and configured.

2.3.1 Installation of the ISDN card

An ISDN card as ISDN connection interface is the most common configuration of the PHACT NT workstation. The numbers of B-channels can grow with the increasing number of installed NT1+ in the network. ISDN cards and therefor the number of simultanously ISDN connections from the central workstation to the NT's can be added as required.

The ISDN card must be installed as in the manufacturers installation procedure described and the CAPI driver properly installed. Sphairon has tested the below mentioned ISDN cards of the manufacturer AVM (www.avm.de) only. We cannot guarantee the function of other ISDN cards.

Up to four ISDN cards can be installed into one workstation in order to increase the batch program run. Using primary rate ISDN cards means up to 120 B-channels or connections can be realised to the same time.

The following ISDN cards can be used:

Passive cards (maximum one per system):

- AVM Fritz card (2 channels)

Aktive cards (up to four per system):

- AVM B1 (2 channels)
- AVM C2 (4 channels)

- AVM C4 (8 channels)
- AVM T1/T1B (30 channels)

The called NT1+ recognize the remote management call (RMC) by using a special HLC element, which is within the setup message. Therefore is it recommended to connect the ISDN card directly to the ISDN network interface. Connecting via a PABX could cause problems and malfunctions.

2.3.2 Installation of the ISDN TA mini+

In smaller ISDN NT1+ networks and low traffic requirements can an external terminal adapter (TA) be used, like the TA mini+ from pmns. The TA must be connected to the serial interface of the workstation and to the S/T interface of the ISDN network on the other side.

The TA mini+ must be configured as follows:

DTE protocol	AT command set
rate adapt. prot.	PPP
data rate	115,2 kbit/s
connector	25-pole V.28
DTR/C mode	2:DTReady 108/2
DSR mode	2:ready for data
RTS/CTS mode	1:DSR -> CTS
DCD/I mode	1:ready for data
dataguard	off
stopbits	1
databits/parity	8/none
echo	on
ISDN info. outp.	address + causes

2.4 Software Installation from CD-ROM

CD-ROM contents:

- PHACT NT installation directory.
- PHACT NT user’s manuals in German and English as PDF files.
- User’s manuals of the ISDN NTs in German and English as PDF files.

- Adobe Acrobat Reader program (to read PDF files).

Prior to starting the installation, you should plug the hardware dongle into the parallel printer port and record the serial number.

Also, you should decide whether you would like to run the single-user or the multi-user setup. If you want to run the multi-user setup you should already connect the corresponding network drive, where the central database resides, to your computer.

Starting the installation:

- Insert the CD-ROM into your CD-ROM drive.
- Normally, the setup menu will start automatically a short time after you have inserted the CD-ROM.
- Select "PHACT NT Installation" from the setup menu. If the setup menu does not start automatically, select "Run" from the Windows start menu and enter command line "**d:\sphereman_nt\setup.exe**". The setup program will now start the installation.
- Follow the instructions which appear one after the other in the dialogue boxes.
- Enter the serial number and the user name when you are prompted to do so. You may enter any name as user name. For the serial number, however, you must use the numeric code printed on the hardware dongle. If you have no hardware dongle you can use PHACT NT as a demo version with restricted functionalities.
- Finally start PHACT NT with the default password „1234“. Setup the communication interface ISDN TA or CAPI in „Extras/Program Settings/Advanced connection“.
- Each workstation in a multi-user installation requires a complete installed PHACT NT including the licensed dongle connected.

3 First Steps

3.1 Program Start

You can start the program by clicking on the PHACT NT icon.

After the program start, the user will be prompted to enter his password (default: 1234). In the same box, you can specify whether the password is to be saved by the program with no later password prompting being necessary, or whether you are to be prompted to enter your password upon each program call.

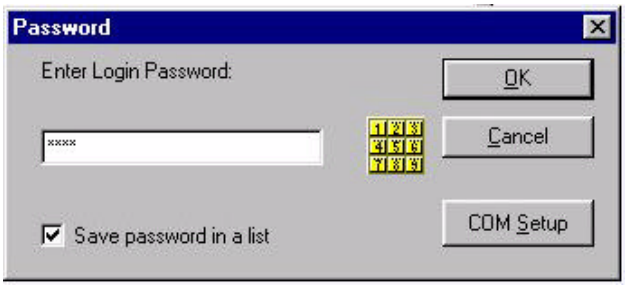


Figure 2: Password entry box

3.2 Basic Controls

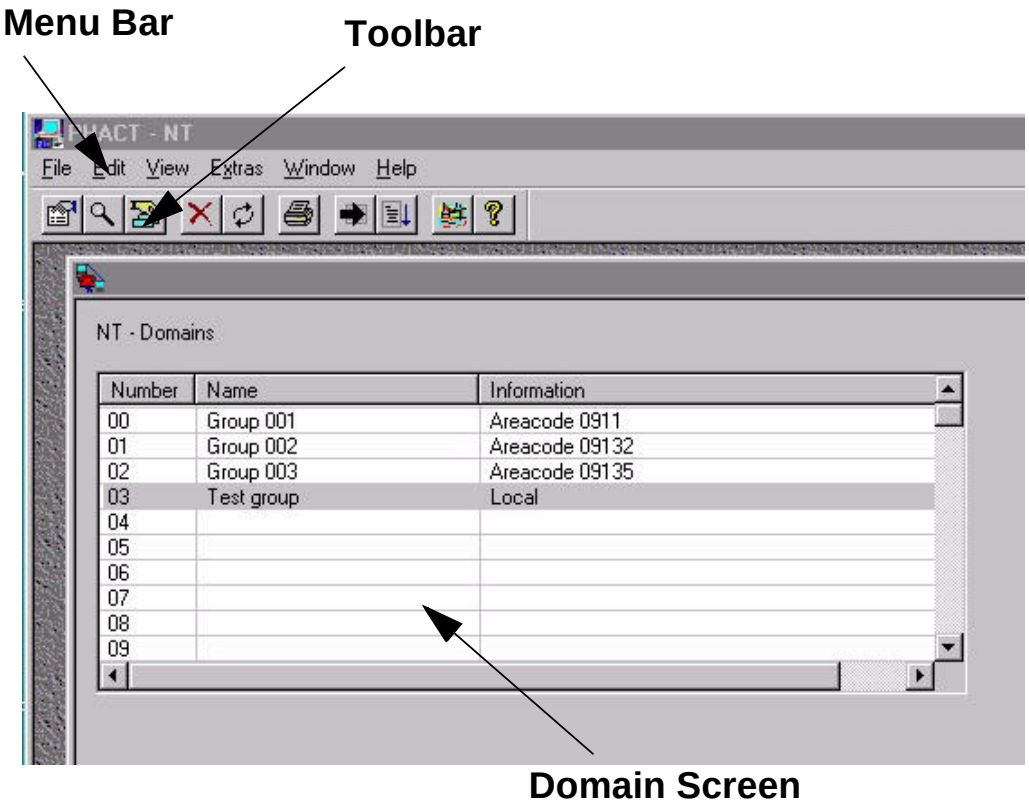


Figure 3: PHACT NT standard screen

The top line shows the "Menu Bar" where each item can be clicked on and a corresponding submenu opened. Such submenu depends upon the context. Some functions will only be available when PHACT NT is connected to an NT.

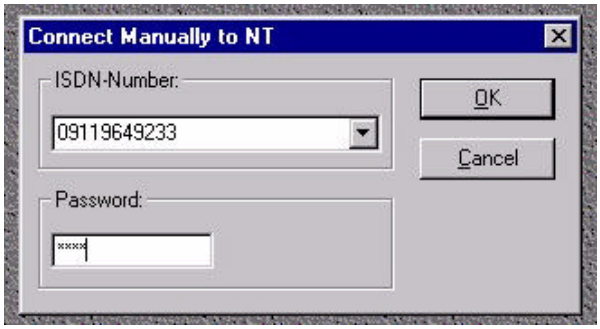
The second bar is the "Toolbar". The toolbar provides you context-dependent quick access to a few functions such as printing, etc.

The next area represents the so-called "Domain Screen" where you can manage your NT's sorted by groups (domains). A new domain can easily be created via the right-hand mouse button (insert). Double-click on a domain to open it. Then you can make further entries.

3.3 Configuration of an NT

3.3.1 Remote Configuration by Direct Connection Setup

For the remote connection to an NT, click on the "Connect Remote" button or F3 to set up the connection. Then a new window will open where the user must enter the call number and the NT password.



Picture 4 Dialog „Connect“

4 Configuration Management

Then you can use the "Configuration" button to open the graphical configuration menu. Now you can easily perform the required configuration on the basis of the NT's user's manual.

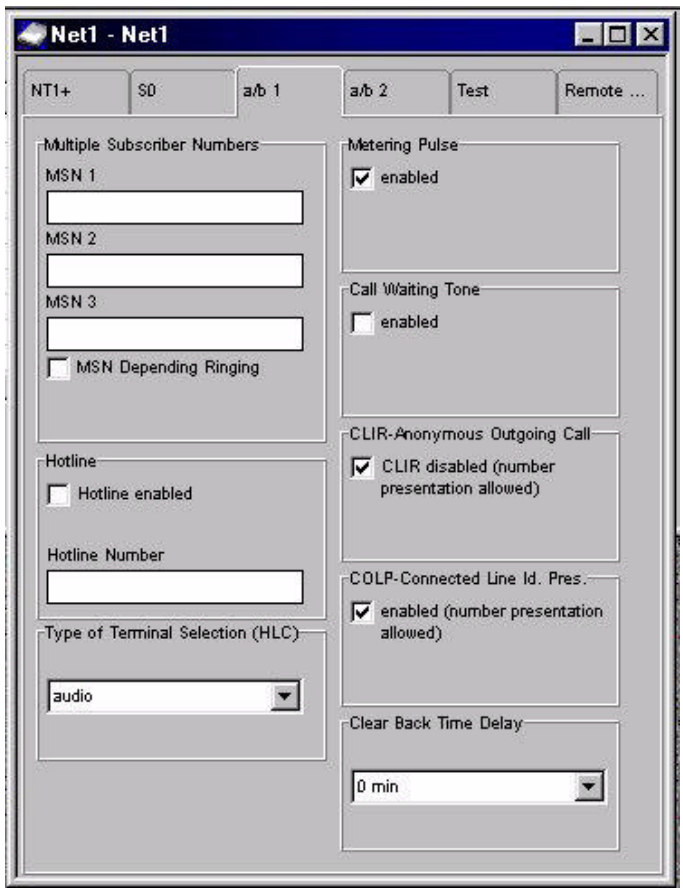


Figure 5: Graphical configuration menu window

4.1 Remote Management

4.1.1 Domain Formation and Structurisation

Instead of re-entering the respective call number for each connection setup, you can also save the call number in the PHACT NT database. In addition to the call number, it is possible to save other parameters (e. g. location, customer number, etc.).

To facilitate clarity for big database stocks the NT's can be divided into so-called domains or subnetworks, respectively. Assignment can, for example, be made on a regional basis (Berlin domain, Munich domain, ...) or by other criteria (e. g. department store group customer, bank group customer, private customer...). For some

functions, it may also make sense to structurise the domains by products (NT1+ subnetwork, NT1+ *web* subnetwork, ...). You can form up to 100 domains or groups, respectively.

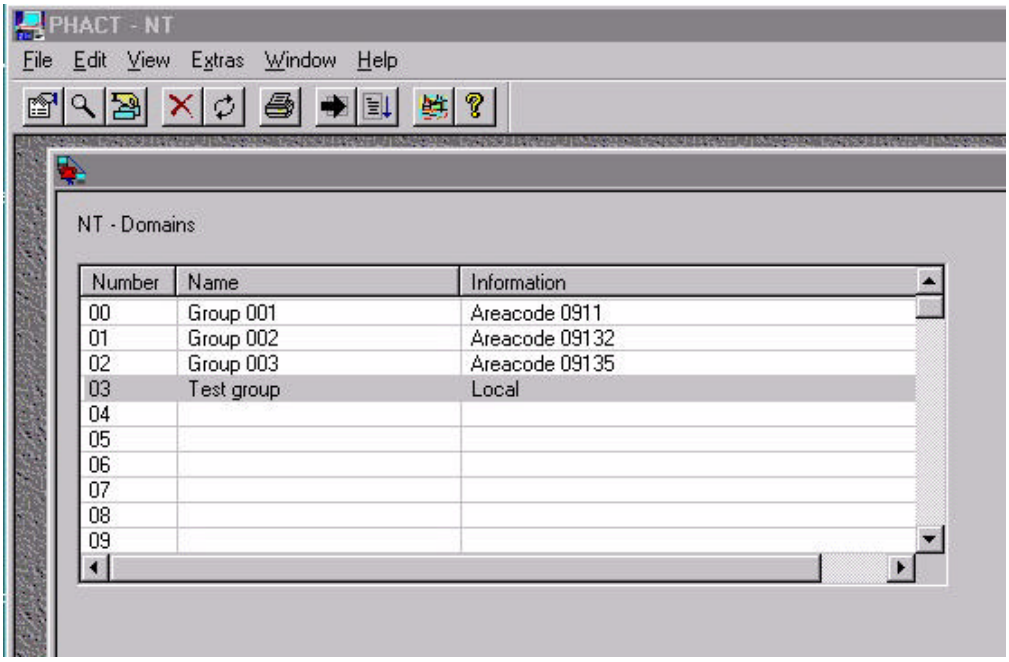


Figure 6: Domain structure example

The grouping of the NT's into domains can also be meaningfully used for a few functions of the PHACT NT software. For example, when batch jobs for the automatic management of the NT networks are started, the organisation of subnetworks or domains makes sense.

4.1.2 Editing the Domains

Use the right-hand mouse button to open a submenu for editing the properties of the individual network elements.

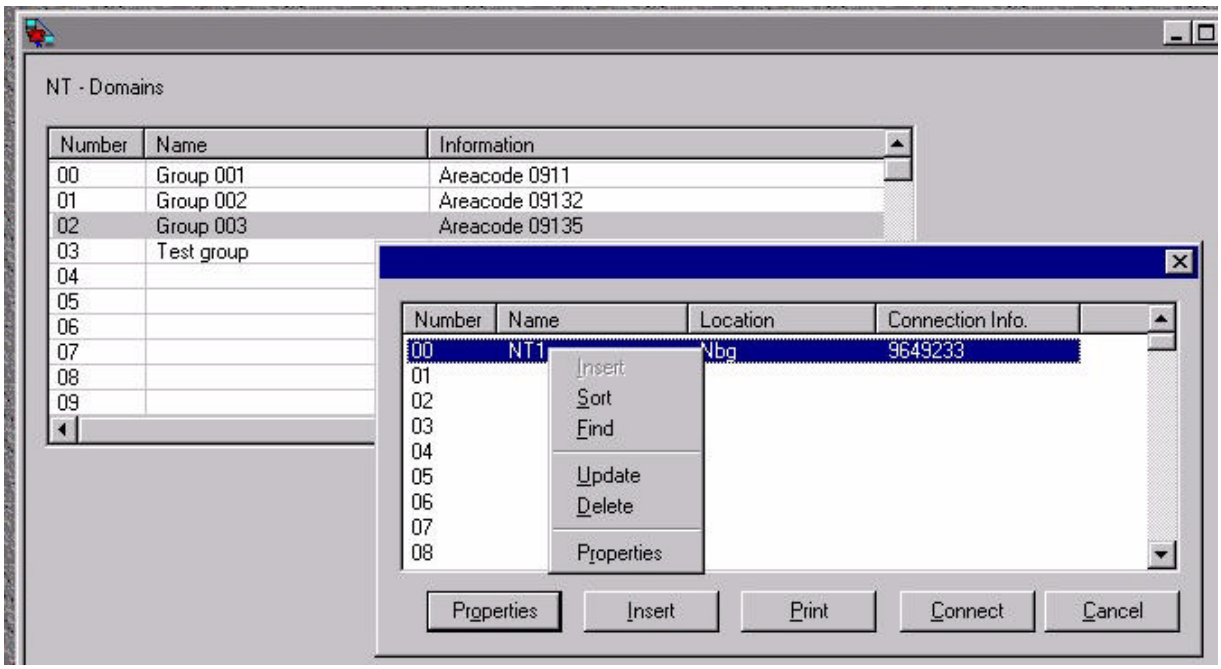


Figure 7: Pop-up menu for editing network elements.

You can use the "Search" function to comfortably look for an entry.

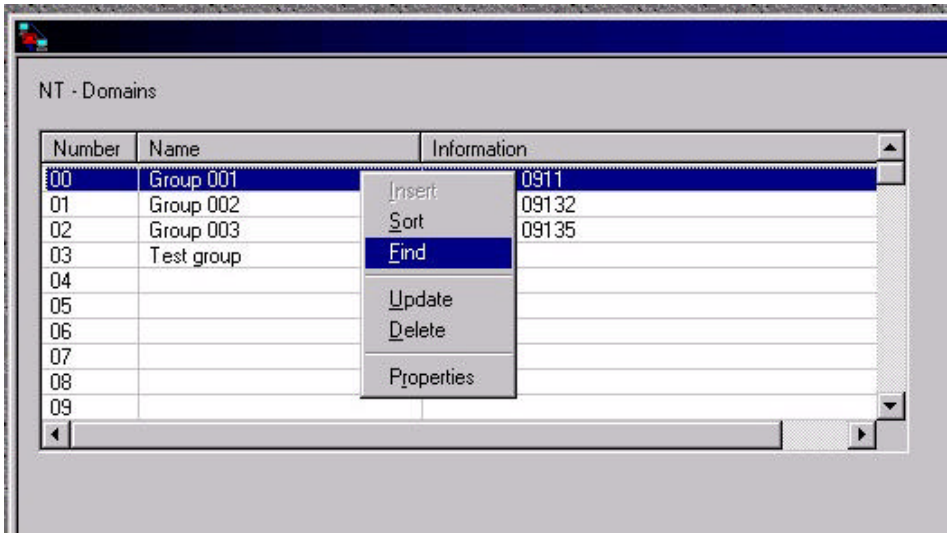


Figure 8: "Search" function.

4.1.3 Importing the Database

PHACT NT, release 2.00 or later, uses a Microsoft Access database. The import of this database from a different PHACT NT installation is possible by simple file copying. Please copy the "**NTDomain.mdb**" file into your PHACT NT installation directory.

4.1.4 Exporting the Database

PHACT NT works with a Microsoft Access database. You can use Microsoft Access to export this database to any destination. You can find this database in the PHACT NT installation directory for the single-user installation, or in the file server directory specified during a multi-user setup.

The database file is named: "**NTDomain.mdb**".

4.1.5 Working with a Multi-User Installation

During the setup of PHACT NT, you can decide whether you want to work with a single-user or multi-user installation. For the single-user installation, the PHACT NT database will be stored in your local workstation and is available to one user only. For the multi-user installation, the database will be stored on a central file server and is available to other users. Before you start the setup, the server drive should already be connected to your PC. You will find the corresponding setting in the Windows explorer under Extras, "Connect Network Drive". The database created by PHACT NT will be in the Microsoft Access format.

The multi-user installation is ideal for small workgroups in order to commonly use and maintain the entries in the database. For this purpose, each party of such workgroup needs a PHACT NT multi-user installation including a licence (hardware dongle). For outgoing management calls, an ISDN access should be connected to the PC of each group member.

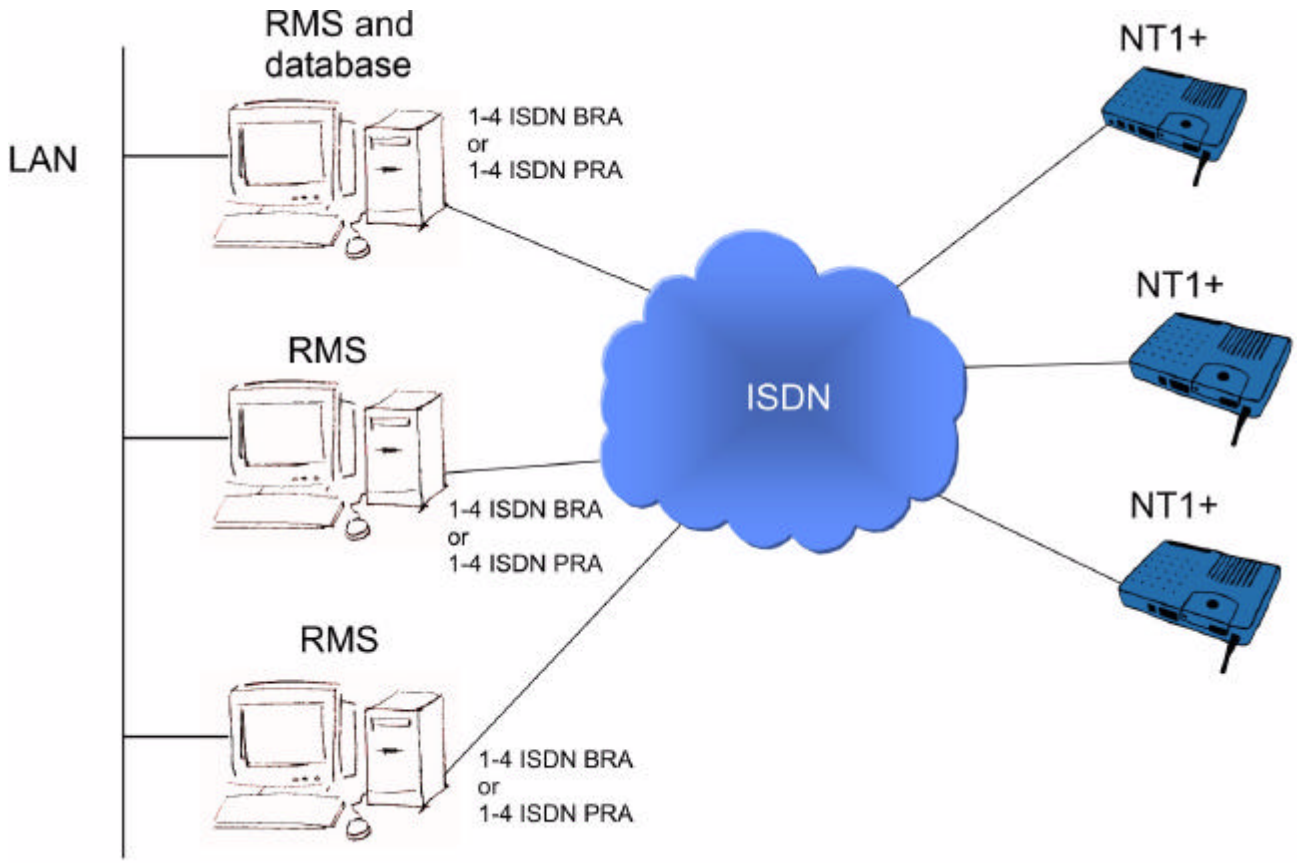


Figure 9: Multi-user configuration with dedicated database

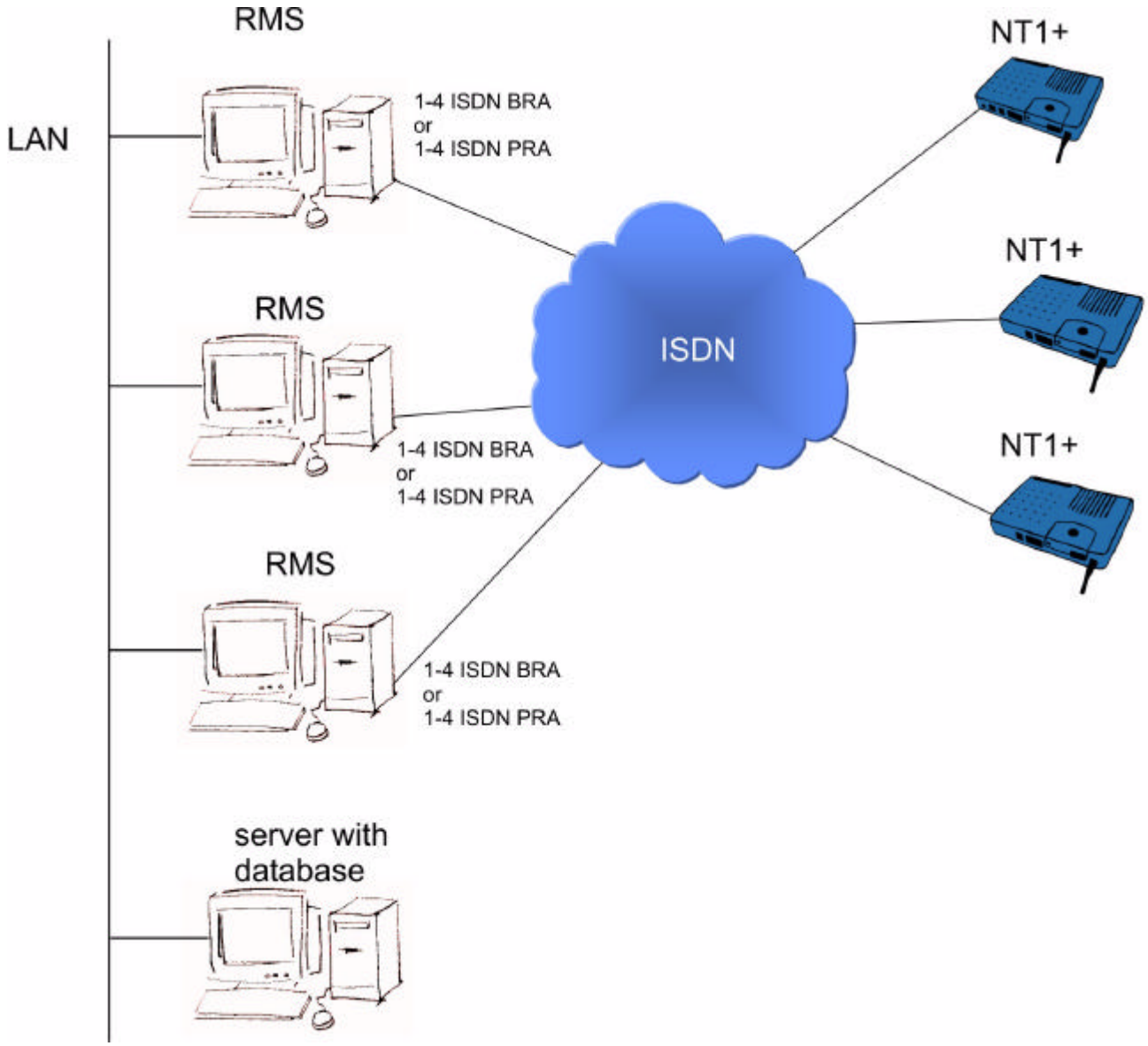


Figure 10: Multi-user configuration with central database server

Even if you work with a multi-user installation, you can use the database (domain list) in the way you are familiar with. If a different group member makes changes to the entries you will not see such changes before re-opening the domain or clicking on the "Update" button.

4.1.5.1 Adding a New Group Member

Adding a new group member is possible any time without problems by setting up a PHACT NT multi-user installation on the PC of the new group member. After the successful setup, the entire database will be immediately available to the new group member.

4.1.5.2 Converting a Single-User Installation

The conversion of a single-user installation into a multi-user installation is not so easily possible.

Therefore, proceed as follows:

- Save the database by copying the "**NTDomain.mdb**" file into a different directory
- Uninstall the PHACT NT single-user installation
- Set up the PHACT NT as multi-user installation
- Copy the "**NTDomain.mdb**" database into the file server directory

4.2 Software Download

4.2.1 Remote Software Download

All devices of our NT1+ family support the "Remote Software Download" option. The remote software download can be initiated through PHACT NT. The software download will be completed after some 1-2 minutes. After this time, you can re-log into the NT.

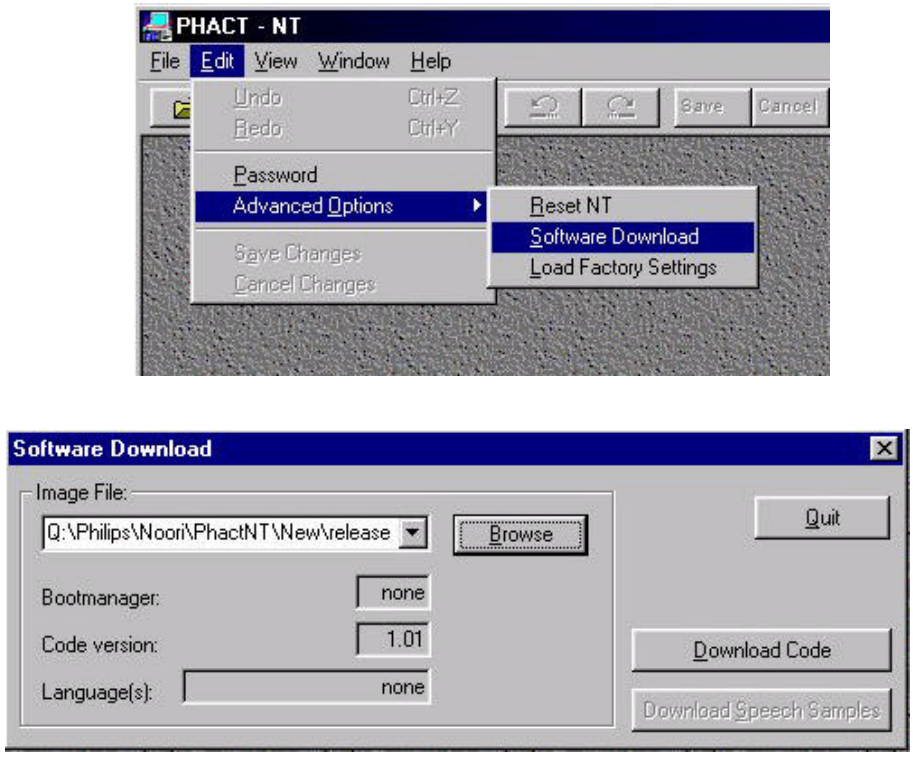


Figure 11: Remote software download input field.

4.3 Print Functions

It is possible to print some parameter records:

- Configuration of an NT
- Domains

4.4 Batch Jobs

The time of execution can be pre-defined so as to be able to run a batch job at low-traffic periods.

Batch jobs are available for the following functions:

- Status polling of NT's
- Automatic configuration download
- Automatic software download

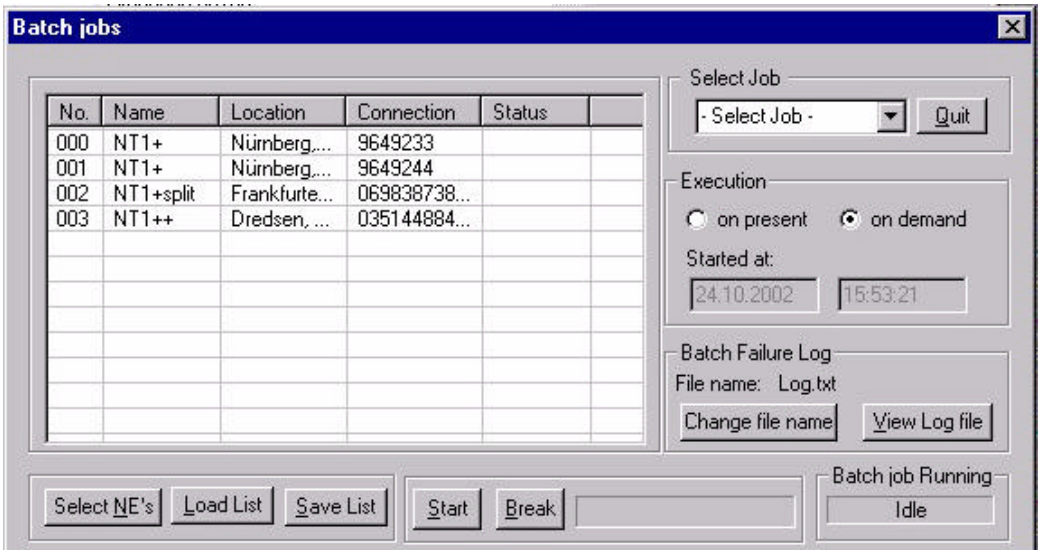


Figure 12: Batch job window.

To run most of the listed functions the passwords of the NTs must be identical to facilitate automatic execution.

As a special feature in the polling status, the function is implemented by deliberate rejection of a call. This method saves charges as no chargeable call to the TA will be established.

Processing a large number of NT's is faster by grouping several B-channels. The used number of B-channels can be setup in „Extras/Programm Settings/Advanced connection“ in the menu „Maximum B-Channels:“.

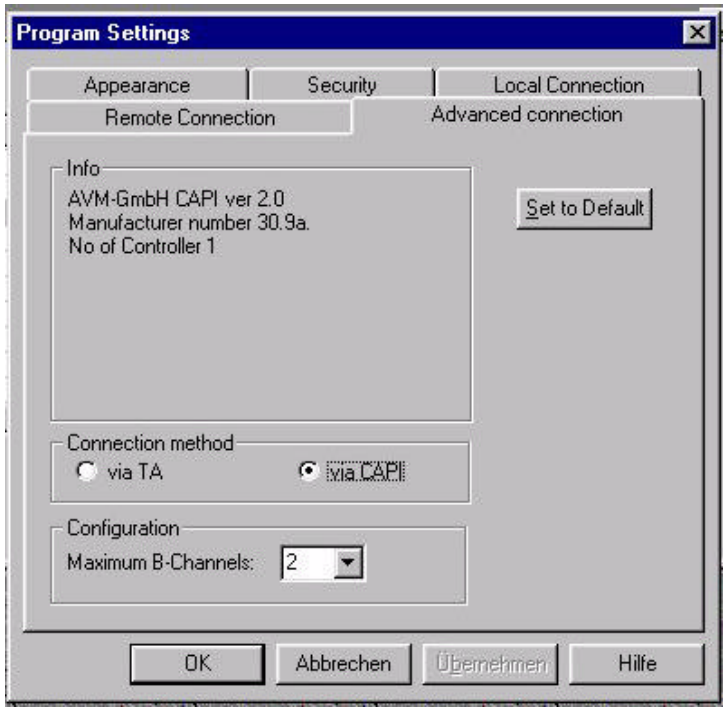


Figure 13: Setting number of B-channels

5 Ordering Information

Name	Description	Ordering No.
PHACT NT demo	Demo Version	
PHACT NT	Single User Version / Multi-user Version	

Table 1: Ordering information.

Sphairon Access Systems GmbH
Germany

Internet www.sphairon.com

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